



STATE OF WASHINGTON

## STATE BUILDING CODE COUNCIL

### Washington State Energy Code Development Standard Energy Code Proposal Form

Jan 2022

Log No. 21-GP3-005

Code being amended: ☐ Commercial Provisions ☒ Residential Provisions

Code Section # R403.5.7 & R403.5.7.1

#### Brief Description:

Delete sections R403.5.7 and R403.5.7.1 (heat pump water heating mandate) in entirety. These two newly added sections of the 2021 WSEC-R did not exist in the previous 2018 edition.

**Proposed code change text:** (Copy the existing text from the Integrated Draft, linked above, and then use underline for new text and ~~strikeout~~ for text to be deleted.)

~~**R403.5.7 Heat pump water heating.** Service hot water in one- and two-family dwellings and multiple single-family dwellings (townhouses) shall be provided by a heat pump system. The heat pump water heating system shall be sized to provide 100 percent of peak hot water demand. Where the heat pump is located in unconditioned space, the heat pump water heating system shall be sized to provide 100 percent of peak hot water demand at an entering source dry bulb (or wet bulb if rated for wet bulb temperatures) air temperature of 40°F (4°C).~~

#### **Exceptions:**

- ~~1. Resistance heating elements integrated into heat pump equipment.~~
- ~~2. Electric water heaters with a rated water storage volume of no greater than 20 gallons.~~
- ~~3. Dwelling units with no more than 1,000 square feet of conditioned floor area.~~
- ~~4. Supplementary water heating systems in accordance with Section R403.5.7.1, provided the system capacity does not exceed the capacity of the heat pump water heating system.~~
- ~~5. Solar water heating systems.~~
- ~~6. Waste heat and energy recovery systems.~~
- ~~7. Heat trace freeze protection systems.~~
- ~~8. Snow and ice melt systems.~~

~~**R403.5.7.1 Supplementary heat for heat pump water heating systems.** Heat pumps used for water heating and having supplementary water heating equipment shall have controls that limit supplementary water heating equipment operation to only those times when one of the following applies:~~

- ~~1. The heat pump water heater cannot meet hot water demand.~~
- ~~2. For heat pumps located in unconditioned space, the outside air temperature is below 40°F (4°C).~~
- ~~3. The heat pump is operating in defrost mode.~~
- ~~4. The vapor compression cycle malfunctions or loses power.~~

~~Exception: Heat trace temperature maintenance systems, provided the system capacity does not exceed the capacity of the heat pump water heating system.~~

**Purpose of code change:**

This proposal begins to remedy conflicting provisions in the WSEC-R that are preempted by federal law (EPCA).

The sole purpose of sections R403.5.7 and R403.5.7.1 is to mandate heat pump water heating appliances thus prohibiting covered products (42 U.S.C. § 6295) in direct violation with the EPCA. Furthermore, the WSEC-R recognizes the need for supplemental heat due to limitations of heat pump technology, yet only provides limited exceptions for electric resistive water heating, but not gas water heating appliances (covered product per 42 U.S.C. § 6295).

For any covered product, “EPCA, 42 U.S.C. § 6297(c), expressly preempts State and local regulations concerning the energy use” California Restaurant Ass'n v. City of Berkeley (9th Cir. 2023).

Your amendment must meet one of the following criteria. Select at least one:

- |   |  |
|---|--|
| <input type="checkbox"/> Addresses a critical life/safety need.   | <input checked="" type="checkbox"/> Consistency with state or federal regulations. |
| <input type="checkbox"/> The amendment clarifies the intent or application of the code.                                     | <input type="checkbox"/> Addresses a unique character of the state.                |
| <input type="checkbox"/> Addresses a specific state policy or statute.<br>(Note that energy conservation is a state policy) | <input type="checkbox"/> Corrects errors and omissions.                            |

Check the building types that would be impacted by your code change:

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> Single family/duplex/townhome | <input type="checkbox"/> Multi-family 4 + stories | <input type="checkbox"/> Institutional |
| <input checked="" type="checkbox"/> Multi-family 1 – 3 stories    | <input type="checkbox"/> Commercial / Retail      | <input type="checkbox"/> Industrial    |

Your name	Gregory Johnson	Email address	gregory.johnson@avistacorp.com
Your organization	Avista Corporation	Phone number	509-495-4928
Other contact name	<a href="#">Click here to enter text.</a>		

## **Economic Impact Data Sheet**

**Is there an economic impact:** ☐ Yes ☒ No

Briefly summarize your proposal's primary economic impacts and benefits to building owners, tenants, and businesses. If you answered "No" above, explain your reasoning.

In reference to the currently in force 2018 WSEC-R, there is zero economic impact as this proposal rolls back changes that the 2021 WSEC-R would have imposed. This proposal averts any cost increases that this section of the 2021 WESC would have created.

Provide your best estimate of the **construction cost** (or cost savings) of your code change proposal? (See OFM Life Cycle Cost [Analysis tool](#) and [Instructions](#); use these [Inputs](#). [Webinars on the tool can be found Here](#) and [Here](#))

**\$0 /square foot** (For residential projects, also provide **\$0 / dwelling unit**)

Show calculations here, and list sources for costs/savings, or attach backup data pages

Provide your best estimate of the **annual energy savings** (or additional energy use) for your code change proposal?

**0 KWH/ square foot (or) 0 KBTU/ square foot**

(For residential projects, also provide **0 KWH/KBTU / dwelling unit**)

Show calculations here, and list sources for energy savings estimates, or attach backup data pages

In reference to the currently in force 2018 WSEC-R, there is zero energy impact as this proposal rolls back changes that the 2021 WSEC-R would have imposed.

List any **code enforcement** time for additional plan review or inspections that your proposal will require, in hours per permit application:

Zero impact to plan review or inspection time or process.

**Small Business Impact.** Describe economic impacts to small businesses:

This proposal averts any cost increases that this section of the 2021 WESC-R would have created. Zero small business impact in relation to the currently in force 2018 WSEC-R.

**Housing Affordability.** Describe economic impacts on housing affordability:

This proposal averts any cost increases that this section of the 2021 WESC-R would have created. Zero housing affordability impact in relation to the currently in force 2018 WSEC-R.

**Other.** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed:

Reduces legal risk and uncertainty to building officials, municipalities, and the state related to conflicting provisions in this code that are preempted by federal law.